DESERT ROCK ENERGY CENTER (AZP 04-01)
PROPOSED PERMIT CONDITIONS

I. Permit Expiration

This permit shall become invalid (1) if construction is not commenced (as defined in 40 CFR 52.21(b)(9)) within 18 months after the approval takes effect, (2) if construction is discontinued for a period of 18 months or more, or (3) if construction is not completed within a reasonable time.

II. Notification of Commencement of Construction and Startup

The Permittee must notify EPA in writing of the anticipated date of initial startup of the Desert Rock Energy Facility not more than sixty (60) days nor less than thirty (30) days prior to such date and must notify EPA in writing of the actual date of commencement of construction and startup within fifteen (15) days after each has occurred. For all purposes of this permit, 'initial startup' shall mean the setting in operation of an affected facility for any purpose. 'Affected facility' is further defined as any apparatus, equipment, or emission unit subject to a standard in this permit or in the applicable Performance for New Stationary Sources regulations found at 40 CFR 60 Subparts A and Da.

III. Facility Operation

All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit must at all times be maintained in good working order and be operated as intended so as to minimize air pollutant emissions.

IV. Malfunction

Reporting

The Permittee must notify EPA by telephone, facsimile, or electronic mail transmission within two (2) working days following the discovery of any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in Section X this permit. In addition, the Permittee must notify EPA in writing within fifteen (15) days of any such failure. The notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial malfunction, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed in Section X, and the methods utilized to mitigate emissions and restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violation of this permit or of any law or regulation that such malfunction may cause.

V. Right of Entry

The EPA Regional Administrator, and/or his authorized representative, upon the presentation of credentials, must be permitted:

1. to enter the premises where the source is located or where any records are required to be kept under the terms and conditions of this permit;

2. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit ;

3. to inspect any equipment, operation, or method required in this permit; and

4. to sample emissions from the source(s).

VI. Transfer of Ownership

In the event of any changes in control or ownership of the facilities to be constructed, the permit must be binding on all subsequent owners and operators. The Permittee must notify the succeeding owner and operator of the existence of this permit and its conditions by letter, a copy of which must be forwarded to the EPA.

VII. Severability

The provisions of this permit are severable, and, if any provision of the permit is held invalid, the remainder of this permit shall be unaffected.

VIII. Other Applicable Regulations

The Permittee must construct and operate the proposed power plant in compliance with all other applicable provisions of 40 CFR Parts 51, 52, 60, 63, 72 through 75, and all other applicable federal, state, and local air quality regulations.

IX. Special Conditions

A. Certification

The Permittee must notify the EPA in writing of compliance with Conditions IX.B. and IX.Q. below, and must make such notification within fifteen (15) days of such compliance. The letter must be signed by a responsible official of the Permittee.

B. Air Pollution Control Equipment and Operation

On or before the date of initial startup of the power plant (as defined in Condition

IX.of this permit), and thereafter, the Permittee shall install, continuously operate, and maintain the following controls:

1. Low NOx burners and a Selective Catalytic Reduction (SCR) system for the control of NOx from the PC boilers.

2. Hydrated lime injection and wet limestone desulfurisation for the control of SO_2, H_2SO_4, and HF from the PC boilers.

3. A baghouse for the control of PM emissions from the PC boilers.

4. Ignition timing retard, turbo-charging and after-cooling for the control of NOx from the emergency diesel generators and from the diesel firewater pumps.

5. Enclosures, and fabric filters for the control of PM emissions from the coal, limestone, and lime handling systems.

6. The inactive coal storage pile will covered with soil or other crusting agents and when coal is added or reclaimed it will be wetted and/or treated with chemical agents to minimize fugitive dust emissions.

7. The aforementioned "continuous" periods of operation do not include periods of startup and shutdown, as defined in Condition IX.

C. Performance Tests

1. Within 60 days after achieving the base load, but no later than 180 days after initial startup, and annually thereafter (within 30 days of the anniversary of the initial performance test), the Permittee must conduct performance tests (as described in 40 CFR 60.8) for SO_2, NOx, CO, VOC, PM, PM_{10}, H_2SO_4, HF and Pb on the exhaust stack gases for the PC boilers and NOx, CO, VOC, PM, and PM_{10} on the exhaust stack gases for the auxiliary boilers. The Permittee must furnish the EPA a written report of the results of such tests within 60 days of completion of each test. After initial performance tests, upon written request from the Permittee, and adequate justification, EPA may waive a specific annual test and/or allow for testing to be done at less than maximum operating capacity.

   The performance tests required by Section IX.C.1. must be performed in accordance with the test methods set forth in 40 CFR 60.8 and 40 CFR 60, Appendix A, as modified below. The following test methods must be used:

i. Performance tests for the emissions of SO_2 shall be conducted using EPA Methods 1-4 and 6C.

ii. Performance tests for the emissions of NOx shall be conducted using EPA Methods 1-4 and 7E. Method 7E shall be performed using a full sampling traverse at sampling points selected according to Method 1. A sample spiking procedure through the entire sampling train must be performed before and after the test runs to assure that NO_2 is being measured properly. If NO_2 measurement falls below 90%, the data must be adjusted or the test repeated.

iii. Performance tests for the emissions of CO shall be conducted using EPA Methods 1-4 and 10.

iv. Performance tests for the emissions of VOC shall be conducted using EPA conditional Method CTM-35.

v. Performance tests for the emissions of PM/PM_{10} shall be conducted using EPA Methods 5I and 202.

vi. Performance tests for the emissions of H_2SO_4 shall be conducted using EPA Methods 1-4 and 8.

vii. Performance tests for the emissions of HF shall be conducted using EPA Methods 1-4 and 13a.

viii. Performance tests for the emissions of lead shall be conducted using EPA Methods 1-4 and 12.

ix. Performance tests for the determination of the opacity of emissions shall be conducted using EPA Method 9.

In lieu of the above-mentioned test methods, the Permittee may use equivalent methods with prior written approval from EPA. The Permittee must notify EPA in writing at least 30 days prior to such tests to allow time for the development of an approvable performance test plan and to arrange for an observer to be present at the test. The performance test plan shall address the conditions specified in IX.C.2., above.

3. For performance test purposes, sampling ports, platforms, and access must be provided by the Permittee on the emission unit exhaust system in accordance with 40 CFR 60.8(e).

D. Emission Limits for SO_2

On or after the date of initial startup, the Permittee shall not discharge or cause the discharge of SO_2 into the atmosphere from each PC boiler in excess of the following amounts:

1. 612 lb/hr, averaged over a 3-hour period.

2. 0.060 lb/MMBtu, averaged over a 24-hour period.

3. 378.5 lb/hr, averaged over a rolling 365-day period.

E. Emission Limits for NO_x (calculated as NO_2)

On and after the date of initial startup, the Permittee shall not discharge or cause the discharge of NO_x from each PC boiler into the atmosphere in excess of the following amounts:

1. 408 lb/hr, averaged over a 3-hour period.

2. 0.060 lb/MMBtu, averaged over a 24-hour period.

3. 378.5 lb/hr, averaged over a rolling 365-day period.

F. Emission Limits for CO

On and after the date of initial startup, the Permittee shall not discharge or cause the discharge of CO from each PC boiler into the atmosphere in excess of the following amounts:

1. 680 lb/hr, averaged over a 3-hour period.

2. 0.10 lb/MMBtu, averaged over a 24-hour period.

3. 631 lb/hr, averaged over a rolling 365-day period.

G. Emission Limits for VOC

On and after the date of initial startup, the Permittee shall not discharge or cause the discharge of VOC from each PC boiler into the atmosphere in excess of the following amounts:

1. 20.4 lb/hr, averaged over a 3-hour period.

2. 0.0030 lb/MMBtu averaged over a 24-hour period.

H. Emission Limits for PM

On and after the date of initial startup, the Permittee shall not discharge or cause the discharge of PM from each PC boiler into the atmosphere in excess of the following amounts:

1. 66.4 lb/hr, averaged over a 6-hour period.

2. 0.010 lb/MMBtu, averaged over a 24-hour period.

I. Emission Limits for Total PM_{10}

On and after the date of initial startup, the Permittee shall not discharge or cause the discharge of total PM_{10} from each PC boiler into the atmosphere in excess of the following amounts:

1. 132.8 lb/hr, averaged over a 6-hour period.

2. 0.020 lb/MMBtu, averaged over a 24-hour period.

J. Opacity Limits

1. On and after the date of initial startup, the Permittee shall not discharge or cause the discharge into the atmosphere from the PC boiler exhaust stack gases which exhibit an opacity of 10% or greater averaged over any six minute period.

2. On or after the date of initial startup, the Permittee shall not discharge or cause the discharge into the atmosphere from any coal, limestone or lime handling system gases, which exhibit an opacity of 10% or greater averaged over any six minute period.

K. Emission Limits for H_2SO_4

On and after the date of initial startup, the Permittee shall not discharge or cause the discharge of H_2SO_4 from each PC boiler into the atmosphere in excess of the following amounts:

1. 26.6 lb/hr, averaged over a 3-hour period.

2. 0.0040 lb/MMBtu, averaged over a 3-hour period.

L. Emission Limits for Lead

On and after the date of initial startup, the Permittee shall not discharge or cause the discharge of lead from each PC boiler into the atmosphere in excess of the more stringent of 1.33 lb/hr or 0.00020 lb/MMBtu, averaged over a 3-hour period.

M. Emission Limits for Flourides (HF)

On and after the date of initial startup, the Permittee shall not discharge or cause the discharge of HF from each PC boiler into the atmosphere in excess of the more stringent of 1.6 lb/hr or 0.00024 lb/MMBtu, averaged over a 3-hour period.

N. Emission Limits During Startups and Shutdowns

1. During the startup and shutdown periods defined in Condition L.2. below, the combined emissions from each PC boiler unit, verified by the CEMS, shall not exceed the following:

   SO_2: 797 lb/hr, averaged over a 3-hour period.
   NOx: 797 lb/hr, averaged over a 3-hour period
   CO: 1,328 lb/hr, averaged over a 3-hour period

2. 'Startup' shall be defined as the period beginning with ignition and lasting until the equipment has reached a continuous operating level and operating permit limits.

3. Shutdown shall be defined as the period beginning with the lowering of equipment from base load and lasting until fuel is no longer added to the boiler and combustion has ceased.

4. The Permittee must operate the CEMS during startups and shutdowns.

5. The Permittee must record the time, date and duration of each startup and shutdown. The records must include calculations of emissions during each event based on the CEMS data. These records must be kept for five years following the date of such event.

6. All emissions during these events shall be included in all calculations of hourly, and annual mass emission rates as required by this permit.

O. Auxiliary Boilers

1. The Permittee shall restrict fuel use for the operation of the auxiliary boilers to low sulfur fuel oil with a sulfur content of no more than 0.05% S.

2. The Permittee shall restrict operation of the auxiliary boilers to no more than 142,560 MMBtu/year. A log reporting the date, time, and duration of the boilers' operation shall be maintained. This log must be kept for five years.

3. On and after the date of initial startup, the Permittee shall not discharge or cause the discharge of SO_2 from each of the auxiliary boilers into the atmosphere in excess of 4.38 lb/hr, averaged over 3-hour period.

4. On and after the date of initial startup, the Permittee shall not discharge or cause the discharge of NOx from each of the auxiliary boilers into the atmosphere in excess of 8.64 lb/hr, averaged over 3-hour period.

5. On and after the date of initial startup, the Permittee shall not discharge or cause the discharge of CO from each of the auxiliary boilers into the atmosphere in excess of 3.09 lb/hr, averaged over a 3-hour period.

6. On and after the date of initial startup, the Permittee shall not discharge or cause the discharge of VOC from each of the auxiliary boilers into the atmosphere in excess of 0.21 lb/hr, averaged over a 3-hour period.

7. On and after the date of initial startup, the Permittee shall not discharge or cause the discharge of PM_{10} from each of the auxiliary boilers into the atmosphere in excess of 2.04 lb/hr, averaged over a 3-hour period.

P. 1000-kW Emergency Backup Generators and 180 kW Fire pumps

1. The Permittee shall restrict fuel use for the emergency backup generators and the fire pump engines to diesel fuel with a maximum sulfur content of 0.05%.

2. The engines shall be used only for maintenance, testing, required regulatory purposes, and during emergency situations and shall not be used to increase the quantity of electricity generated for sale. The Permittee shall restrict the operation of the emergency backup generators and the fire pump engines to no more than 2,676 MMBtu/year. This restriction is not applicable during emergency situations.

Q. Continuous Emissions Monitoring System

1. Prior to the date of initial performance testing or 60 days from initial startup, whichever is sooner, the Permittee must install, maintain and operate the following continuous monitoring systems (CEMS) in the PC boiler exhaust system:

   i. A continuous monitoring systems to measure stack gas SO_2, NOx, CO, and O_2 concentrations. The systems must meet EPA monitoring performance specification (40 CFR 60.13 and 40 CFR 60, Appendix B, Performance Specifications 2, 3 and 4). The SO_2 and NOx monitoring system must also meet the 10% relative accuracy requirement of 40 C.F.R. Part 75 Appendix A 3.3.

   ii. A continuous monitoring system to measure stack gas PM concentrations. The monitor shall be operated according to performance specification 11 of 40 CFR 60, Appendix B.

   iii. Calculation of the SO_2, NO_2, CO and PM hourly emission rates shall use the pollutant and diluent monitors required in Condition Q.1.i. with either stack flow monitoring adjusted for moisture, or calculated stack flow rates. Any stack flow monitoring system shall meet the requirements of 40 CFR 75 Appendix A. Calculations of stack flow shall use the appropriate F factor from 40 CFR 60 Appendix A Method 19, the O_2 monitor, and a fuel flow meter(s) which meets the requirements of 40 CFR 75 Appendix D 2.1.5 and 2.1.6.

   iv. Not less than 90 days prior to the date of initial startup of the Facility, the Permittee shall submit to the EPA a quality assurance project plan for the certification and operation of the continuous emission monitors. Such a plan shall conform to EPA requirements contained in 40 CFR 60, Appendix F for CO, SO_2, NO_2, and O_2, and 40 CFR 75 Appendix B for stack flow. The plan shall be updated and resubmitted upon request by EPA.

2. Prior to the date of startup and thereafter, the Permittee shall install, maintain and operate a transmissometer system for continuous measurement of the opacity of stack emissions. The system shall meet EPA monitoring performance specifications (40 CFR 60.13 and 40 CFR 60, Appendix B, Performance Specification 1).

R. Reporting and Record Keeping

1. The Permittee must maintain a file of all records, data, measurements, reports, and documents related to the operation of the facility, including, but not limited to, the following: all measurements or data pertaining to continuous monitoring systems evaluations; all continuous monitoring systems or monitoring device calibration checks; all continuous monitoring data; all records or reports pertaining to adjustments and/or maintenance performed on any system or device at the Facility; all records relating to performance tests; and all other information required by this permit and 40 CFR 60 Appendices A-B and 40 CFR 75, recorded in a permanent form suitable for inspection. The file must be retained for five years following the date of such measurements, maintenance, reports and/or records.

2. The Permittee must notify EPA of the date on which the demonstration of the continuous monitoring system performance commences (40 CFR 60.13). This date must be no later than 60 days after full load operation but not later than 180 days after initial startup.

3. The Permittee must submit a written report of all excess emissions to EPA for every calendar quarter. The report must include the following:

    i. The magnitude of the excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factors used, the date and time of commencement, and compilation of each time period of excess emissions.

    ii. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of any equipment. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted must also be reported.

    iii. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks, and the nature of the system repairs or adjustments.

    iv. When no excess emissions have occurred or the continuous monitoring system has not been inoperative, repaired, or adjusted, such information must be stated in the report.

    v. Excess emissions shall be defined as any period during which the average emissions of SO_2, NOx, CO or PM as measured by the CEMS exceeds the maximum emission limits set forth in

Conditions IX.D, E, F and G; and any startup and shutdown event defined in Condition IX.M during which aggregate emissions as measured by the CEMS exceed the maximum emission limits set forth in Condition IX.M.

4. Excess emissions indicated by the CEMS must be considered violations of the applicable emission limit for the purpose of this permit.

S. New Source Performance Standards

The proposed power plant is subject to the federal regulations entitled Standards of Performance for New Stationary Sources (40 CFR 60). The Permittee must meet all applicable requirements of 40 CFR 60 Subparts A, Da, Dc, Y, OOO, and Kb of this regulation.

T. Permit Revision

1. At the end of an 18-month period immediately following initial startup, the Permittee may submit to EPA the performance testing data collected in this period for total PM_{10} for each PC boiler. The performance testing data shall be in raw and reduced or summarized form.

2. If EPA determines from the performance testing data that the PC boilers and associated control devices have not achieved PM_{10} emissions lower than the limits prescribed in X.I., EPA may revise these conditions to reflect the equipment and control devices' performance.

X. Agency Notifications

All correspondence as required by this permit must be forwarded to:

Director, Air Division (Attn: AIR-3)
EPA Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Environmental Department Director
Navajo Nation EPA
P.O. Box 9000
Window Rock, AZ 86515